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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/696,072

10/29/2003

Keith Bircher

03-022

5954

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7590

06/18/2007

COHEN & GRIGSBY, P.C.

11 STANWIX STREET

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EXAMINER

VANORE, DAVID A

ART UNIT

PAPER NUMBER

2881

NOTIFICATION DATE

DELIVERY MODE

06/18/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/696,072	BIRCHER ET AL.	
	Examiner	Art Unit	
	David A. Vanore	2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-13, 15 and 16 is/are rejected.
- 7) ☒ Claim(s) 6 and 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/04; 5/05</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claim 3 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.
2. Claim 3 recites how the device is operated, not any further structure and therefore fails to limit the apparatus of claims 1 or 2.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 5, 7, and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.
5. The specification does not contain written description regarding the embodiment where the fourth and fifth light sources are positioned in the required assembly of light sources. The specification and drawings contain only reference to up to three light sources at page 4 for example.

6. The specification further does not describe the embodiment where the baffles are adapted to cause $\frac{1}{4}$ of the fluid to flow above a topmost light source and $\frac{1}{4}$ of the fluid to flow below a bottommost light source as set forth in claim 7.

Drawings

7. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the embodiment where up to 5 light sources are present in a light source assembly must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-4 and 8-12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hwang (USPN 5,178,758).

10. Regarding claims 1, 9, and 10, Hwang teaches an ultraviolet (UV) fluid treatment device comprising a housing (Item 3) through which a fluid flows via inlet (Item 29 in Fig. 2) and outlet (Item 20 in Fig. 2). The housing defines an assembly of UV sources (Items 24, note Fig. 3 depicting 3 such sources in the assembly) which are disposed in a horizontal plane where at least one source disposed below other UV sources defining an uppermost and bottommost UV source. The language regarding the result of how the device is operated where the bottommost UV source is operated at a higher power level does not appear to reflect a further structural feature of the device. Rather, such language describes a consequence occurring when the device is operated in a certain way. Further, Hwang includes a plurality of baffles shown in cross-section in Fig. 7 and Fig. 8.

11. Regarding claim 2, Hwang shows that the assembly comprises at least one baffle (Fig. 7 and 8) to cause fluid to pass within a certain maximum distance from at least one UV source.

12. Regarding claim 3, the claim recites how each at least one assembly is operated, not any further structure of the claimed device. The claim is rejected for the same reason as claim 1 or 2.

13. Regarding claims 4 and 12, the light sources, as shown in Fig. 8, are equidistant from a central point. Therefore, the required third light source is positioned a distance between 0.25 and 2 times the distance between the other light sources in the downstream position required in the claim.

14. Regarding claim 8, since the lamps in Hwang appear to be of the same type, their power output appears to be the same, producing a power ratio of 1.

15. Regarding claim 11, the baffles previously indicated are at a right angle to the housing wall.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang in view of Clark et al. (USPN 7,038,219).

18. Hwang teaches all the required limitations of claim 1 as pointed out above.

19. Hwang fails to teach the inclusion of two photo-detectors at topmost and bottommost portions of a UV treatment device.

20. Clark et al. teaches a UV treatment device including UV photodetectors (102) at the top and bottom of the treatment chamber which are utilized to monitor and control the operating parameters of the UV lamps contained in Clark et al.

21. Clark et al. modifies the Hwang reference to include photodetectors used to monitor and control lamp function.

22. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the photodetector system of Clark et al. with the Hwang structure to provide a monitor and control mechanism to control UV lamp performance such that a material to be treated with UV light is exposed in a desired fashion.

Allowable Subject Matter

23. Claims 6 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


24. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach or suggest the device of claims 6 and 14, containing all the limitations of their respective parent claims, where the distinguishing limitations is the configuration of the baffles which causes 2/3 of the fluid to flow between upper and bottom UV sources and the remaining 1/3 of the flow divided about evenly above the top UV source and bottom UV source.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Vanore whose telephone number is (571) 272-2483. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



David A Vanore
Primary Examiner
Art Unit 2881

dav